

CLAIMS

It is claimed:

1. A battery control circuit having a battery voltage detecting section for detecting a voltage of a battery comprising:

a resistor and a switching element connected in series being connected to said battery in parallel; and

a battery controlling section for acquiring information relating to a change in the voltage of said battery by turning on said switching element to allow a current of said battery to flow through said resistor, the voltage being detected by said battery voltage detecting section,

wherein said battery controlling section determines a residual capacity of said battery based on the information relating to the change in the voltage of said battery.

2. The battery control circuit according to claim 1,

wherein said battery voltage detecting section comprises first and second voltage-dividing resistors connected in series, and

said first and second voltage-dividing resistors are connected to said battery in parallel, and a voltage at a connection point between said first and said second voltage-dividing resistors is detected as the voltage of said battery.

3. The battery control circuit according to claim 1,

wherein the information relating to the change in the voltage of said battery is a change amount of the voltage of said battery, the change amount being detected by said battery voltage detecting section when said switching element is turned on.

4. The battery control circuit according to claim 1, further comprising:

a voltage recovery time measurement section for measuring a time period from a time when said switching element is turned off to a time when the voltage of the battery, which is detected by said battery control circuit in a state where said switching element is ON, recovers to a predetermined voltage value,

wherein the information relating to the change in the voltage of said battery is said time period measured by said voltage recovery time measurement section.

5. The battery control circuit according to claim 1, further comprising:

a storing section for storing characteristics information relating to said residual capacity of said battery,

wherein said battery voltage detecting section refers to said characteristic information in said storing section to determine the residual capacity of said battery based on the information relating to the change in the voltage of said battery.

6. The battery control circuit according to claim 2,

wherein the information relating to the change in the voltage of said battery is a change amount of the voltage of said battery, the change amount being detected by said battery voltage detecting section when said switching element is turned on.

7. The battery control circuit according to claim 2, further comprising:

a voltage recovery time measurement section for measuring a time period from a time when said switching element is turned off to a time when the voltage of the battery, which is detected by said battery control circuit in a state where said switching element is ON, recovers to a predetermined voltage value,

wherein the information relating to the change in the voltage of said battery is said time period measured by said voltage recovery time measurement section.

8. The battery control circuit according to claim 2, further comprising:

a storing section for storing characteristic information relating to said residual capacity of said battery,

wherein said battery voltage detecting section refers to said characteristic information in said storing section to determine the residual capacity of said battery based on the information relating to the change in the voltage of said battery.

9. The battery control circuit according to claim 3, further comprising:

a voltage recovery time measurement section for measuring a time period from time when said switching element is turned off to time when the voltage of the battery, which is detected by said battery control circuit in a state where said switching element is ON, recovers to a predetermined voltage value,

wherein the information relating to the change in the voltage of said battery is said time period measured by said voltage recovery time measurement section.

10. The battery control circuit according to claim 3, further comprising:

a storing section for storing characteristic information relating to said residual capacity of said battery,

wherein said battery voltage detecting section refers to said characteristic information in said storing section to determine the residual capacity of said battery based on the information relating to the change in the voltage of said battery.

11. The battery control circuit according to claim 4, further comprising:

a storing section for storing characteristic information relating to said residual capacity of said battery,

wherein said battery voltage detecting section refers to said characteristic information in said storing section to determine the residual capacity of said battery based on the information relating to the change in the voltage of said battery.

12. The battery control circuit according to claim 6, further comprising:

a voltage recovery time measurement section for measuring a time period from time when said switching element is turned off to time when the voltage of the battery, which is detected by said battery control circuit in a state where said switching element is ON, recovers to a predetermined voltage value,

wherein the information relating to the change in the voltage of said battery is said time period measured by said voltage recovery time measurement section.

13. The battery control circuit according to claim 6, further comprising:
a storing section for storing characteristic information relating to said residual capacity of said battery,
wherein said battery voltage detecting section refers to said characteristic information in said storing section to determine the residual capacity of said battery based on the information relating to the change in the voltage of said battery.
14. The battery control circuit according to claim 12, further comprising:
a storing section for storing characteristic information relating to said residual capacity of said battery,
wherein said battery voltage detecting section refers to said characteristic information in said storing section to determine the residual capacity of said battery based on the information relating to the change in the voltage of said battery.
15. An electronic device comprising:
the battery control circuit according to any one of claims 1 to 14,
wherein operating power is supplied from said battery.
16. The electronic device according to claim 15,
wherein a component consuming power based on said operating power is said resistor.